PATENT
Docket No.: **201196/50 (80242/US)**

#16 Recon, w/Exhibits 8/8/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Vladka Čurin-Šerbec	Examiner: U. Winkler
Serial No.	:	09/576,724	
Cnfrm No.	:	3140	Art Unit: 1648
Filed	:	May 23, 2000	
For	:	ANTIBODIES CAPABLE TO SELECTIVELY DETECT PRION PrP^{Sc} ISOFORMS	

RESPONSE UNDER 37 C.F.R. § 1.111

U.S. Patent and Trademark Office
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In view of the following remarks, reconsideration of the April 23, 2002 office action is respectfully requested.

Infectious prions are essentially composed of a protein designated as the "scrapie isoform" of the prion protein, abbreviated as PrP^{Sc}. A post-translational process, as yet undefined, obviously generates PrP^{Sc} from the ubiquitous cellular prion protein PrP^{C}. Both PrP^{Sc} and PrP^{C} are encoded by a single copy chromosomal gene and it has been shown that the inoculated prion initiates the production of PrP^{Sc} from the normal host PrP^{C} polypeptide. In contrast to the normal form, which is mainly found on the cell surface, the isoforms are accumulated within the cells in vesicles. The isoforms also differ in their conformational structure, exhibited by an increased β-sheet content which might be a cause for the increased protease resistance of the PrP^{Sc} isoform versus the normal form PrP^{C}.

At present there is no treatment nor any vaccine available to prevent the disease. This may be mainly due to the obvious low immunogenicity of the PrP^{Sc} isoform which has prevented the manufacture of antibodies specifically recognizing the PrP^{Sc} isoform, while simultaneously avoiding cross-reactivity with the "normal" isoform, PrP^{C}.

Moreover, there is also no adequate test to detect the disease in a live animal. Veterinary pathologists may confirm bovine spongiform encephalopathy ("BSE") by